ALGE-TIMING

Version-E150225

D-LINE
D-SAT

Manual

Important Information

General

Before using your ALGE-TIMING device read the complete manual carefully. It is part of the device and contains important information about installation, safety and its intended use. This manual cannot cover all conceivable applications. For further information or in case of problems that are mentioned not at all or not sufficiently detailed, please contact your ALGE-TIMING representative. You can find contact details on our homepage www.alge-timing.com

Safety

Apart from the information of this manual all general safety and accident prevention regulations of the legislator must be taken into account.
The device must only be used by trained persons. The setting-up and installation must only be executed according to the manufacturer's data.

Intended Use

The device must only be used for its intended applications. Technical modifications and any misuse are prohibited because of the risks involved! ALGE-TIMING is not liable for damages that are caused by improper use or incorrect operation.

Power supply

The stated voltage on the type plate must correspond to voltage of the power source. Check all connections and plugs before usage. Damaged connection wires must be replaced immediately by an authorized electrician. The device must only be connected to an electric supply that has been installed by an electrician according to IEC 60364-1. Never touch the mains plug with wet hands! Never touch live parts!

Cleaning

Please clean the outside of the device only with a smooth cloth. Detergents can cause damage. Never submerge in water, never open or clean with wet cloth. The cleaning must not be carried out by hose or high-pressure (risk of short circuits or other damage).

Liability Limitations

All technical information, data and information for installation and operation correspond to the latest status at time of printing and are made in all conscience considering our past experience and knowledge. Information, pictures and description do not entitle to base any claims. The manufacturer is not liable for damage due to failure to observe the manual, improper use, incorrect repairs, technical modifications, use of unauthorized spare parts. Translations are made in all conscience. We assume no liability for translation mistakes, even if the translation is carried out by us or on our behalf.

Disposal

If a label is placed on the device showing a crossed out dustbin on wheels (see drawing), the European directive 2002/96/EG applies for this device.
Please get informed about the applicable regulations for separate collection of electrical and electronical waste in your country and do not dispose of the old devices as household waste. Correct disposal of old equipment protects the environment and humans against negative consequences!

Copyright by ALGE-TIMING GmbH

All rights reserved. Any duplication, either in full or in part, requires the prior written consent of the copyright holder.

Declaration of Conformity

We declare that the following products comply with the requirements of the listed standards. Parts that we use in the product are CE certificated by the manufacturers and ALGE-TIMING GmbH does not change them.

We, **ALGE-TIMING GmbH**
Rotkreuzstrasse 39
A-6890 Lustenau

Declare under our sole responsibility, that the display board:

D-LINE

and its models of the series 57, 100, 150, 250, 300, 450, 600, 1000, 1500, SDA1 produced from 01.01.2005 and later

is in conformity with the following standard(s) or other normative documents(s):

Safety:	IEC 60950:1999 / EN 60950:2000 EN 60335-1:2002 + A11:2004 + A1:2004 + A12:2006 + A2:2006
EMC:	EN55022:2006+A1:2007 EN55024:1998+A1:2001+A2:2003 EN61000 3-2:2006 EN61000 3-3:1995+A1:2001+A2:2005

Additional Information:
The product herewith complies with the requirements of the Low Voltage Directive 73/23/EEC, also the EMC Directive 2004/108EG and accordingly carries the CE-marking.

Lustenau, 30.11.2010 ALGE-TIMING GmbH

Albert Vetter
(General Manager)

Table of Contents

1 Operation....5
1.1 Change of Displaymode....5
1.2 Standard Settings....5
1.3 Parameter List....5
1.3.1 Set Daytime Hours [P0]....5
1.3.2 Set Daytime Minutes [P1]....5
1.3.3 Set Daytime Seconds [P2]....5
1.3.4 Set the Day of the Date [P3]....5
1.3.5 Set the Month of the Date [P4]....5
1.3.6 Set the Year of the Date [P5]....5
1.3.7 Display Time for Daytime [P6]....6
1.3.8 Display Time for Date [P7]....6
1.3.9 Display Time for Temperature [P8]....6
1.3.10 Calibration of Temperature....6
1.3.11 Display Time for Relative Humidity....6
1.3.12 Calibration of Relative Humidity....6
1.3.13 GPS Offset Hours to GMT....6
1.3.14 GPS Offset Minutes GMT....6
1.3.15 Area Settings for Temperature and Time....6
1.3.16 Brightness [A0] (b)....7
1.3.17 Displaymode and Serial Interface [A1], (S)....8
1.3.18 Time-Out Time-Temperature-Date [A2]....9
1.3.19 Address Setting [A3] (A)....9
1.4 Extended Data Mode....10
1.4.1 Timer S4, Points Show Jumping....10
1.4.2 TdC8001, Points Show Jumping....11
1.4.3 8-digit Scoreboard for Swimming....12
1.4.4 Fixed Comma or Colon....12

2 Special Functions....13
2.1 Stopwatch, Countdown and Counter....13
2.1.1 Stopwatch (from Version 4.5)....13
2.1.2 Countdown (from Version 4.5)....13
2.1.3 Counter (from Version 4.5)....14
2.1.4 Stopwatch-Countdown (Version 4.3.and 4.4)....14
2.1.5 Counter (Version 4.3.and 4.4)....14

3 Technical Data....16
3.1 Dimensions....16
3.2 Power Supply....17
3.2.1 Supply from Mains....17
3.2.2 Supply form External Battery....17
3.3 Connections....17
3.3.1 D-LINE....17
3.3.2 D-SAT....17
3.4 Interface Formats....18
3.4.1 Serial Interface:....18
3.4.2 RS485....20
3.4.3 Ethernet....20
[Parameter list of old models]
(Parameter list for 3-digit models) some parameters are not available at 3-digit models!

1 Operation

1.1 Change of Displaymode

You can change the Displaymode with the internal button or with the PC-Software and the cable 145-05.
To change the parameters with the internal button, press the button until the first parameter appears on the display. If you wait for a few seconds the value of the parameter starts blinking. You can now change the parameter or value that is blinking. To save the changings you need to pass all parameters until leaving the menu.

1.2 Standard Settings

The D-LINE score boards are delivered with a standard setting optimized for timing purposes. To reset the factory settings keep the internal button pressed until the software version appears on the display!
ATTENTION! Only scoreboards built after 2005-06 are equipped with this function!

1.3 Parameter List

The parameter list is designed in such a way as to showing the user by the name of the parameter the one he would like to change.

ATTENTION! Older D-LINE models have different parameter names! These old parameter names can be found in square brackets [xx]. Some of the settings are identical and some are not available at all with older models.

ATTENTION! 3-digit displays are not equipped with many of the below stated parameters or have to be displayed differently due to lack of space. The parameter names for 3-digit displays can be found in round brackets.(xx).

1.3.1 hh Set Daytime Hours [P0]

This parameter is to adjust the hours of the daytime.

1.3.2 EE Set Daytime Minutes [P1]

This parameter is to adjust the minutes of the daytime.

1.3.3 SS Set Daytime Seconds [P2]

This parameter is to adjust the seconds of the daytime.

1.3.4 dd Set the Day of the Date [P3]

This parameter is to adjust the day of the date.

1.3.5 dE Set the Month of the Date [P4]

This parameter is to adjust the month of the date.

1.3.6 dY Set the Year of the Date [P5]

This parameter is to adjust the year of the date.

1.3.7 Display Time for Daytime [P6]

Display time of daytime being shown. Switch off daytime being displayed by setting value to 00.

1.3.8 Display Time for Date [P7]

Display time of date being shown. Switch off date being displayed by setting value to 00.

1.3.9 Display Time for Temperature [P8]

Display time of temperature being shown. Switch off temperature being displayed by setting value to 00. Only available if temperature sensor is connected.

1.3.10 Calibration of Temperature

This parameter it shows only when the temperature is on (e.g. tt 05). The shown temperature can be adjusted by up to +/-9 degrees.

1.3.11 Display Time for Relative Humidity

Display time relative humidity being shown. This parameter is only available if a sensor is connected.

1.3.12 Calibration of Relative Humidity

This parameter it shows only when the sensor adjustment is on (e.g. tH 05). The shown relative humidity can be adjusted by up to +/-9 percent.

1.3.13 GPS Offset Hours to GMT

This parameter it shows only when there is a connection for a GPS. With this parameter you can adjust the offset to GMT in hours.

1.3.14 GPS Offset Minutes GMT

This parameter it shows only when there is a connection for a GPS. With this parameter you can adjust the offset to GMT in minutes.

1.3.15 Area Settings for Temperature and Time

Area parameter for setting the diplaymode for time and temperature. The first digit in the setting is for automatically changing the clock to summertime, the second one is for the display mode. Following settings are possible.

1.3.15.1 Summertime Switching [P9]

The first digit of the area setting is responsible for internally changing the clock to summer and wintertime.

1.3.15.1.1 Summertime Switching [0x]

No internal changing, used for DCF-controlled clocks.

1.3.15.1.2 European Summertime [1x]

Change to summertime for Europe, used with internal clock, GPS and NTP-synchronization.

1.3.15.1.3 USA Summertime [2x]

Change to summertime for USA, used with internal clock, GPS and NTP-synchronization.

1.3.15.1.4 Australian Summertime [3x]

Change to summertime for Australia, used with internal clock, GPS and NTP-synchronization.

1.3.15.2 Time and Temperature Setting

The second digit of the area setting is used for the display mode of the time and temperature. 12 h, 24 h, Celsius or Fahrenheit.

1.3.15.2.1 Ar 0 Celsius and 24 h [x0]

Time in 24 h mode and temperature in Celsius.

1.3.15.2.2 Ar 2 Celsius and 12 h [x1]

Time in 12 h mode and temperature in Celsius

1.3.15.2.3 Ar F Fahrenheit and 24 h [x2]

Time in 24 h mode and temperature in Fahrenheit

1.3.15.2.4 Ar h Fahrenheit and 12 h

Time in 12 h mode and temperature in Fahrenheit

1.3.15.2.5 Ar 1 Celsius and 24 h

Time in 24 h mode and temperature in Celsius but on 6-digit D-LINE time is centered and without running seconds.

1.3.15.2.6 Ar 2 Celsius and 12 h

Time in 12h mode and temperature in Celsius, but on 6-digit D-LINE time is centered and without running seconds.

1.3.15.2.7 Ar 3 Fahrenheit and 24 h

Time in 24 h mode and temperature in Fahrenheit but on 6-digit D-LINE time is centered and without running seconds.

1.3.15.2.8 Ar 4 Fahrenheit and 12 h

Time in 12 h mode and temperature in Fahrenheit but on 6-digit D-LINE time is centered and without running seconds.

1.3.16 br Brightness [A0] (b)

With this parameter brightness settings and effects can be set. The first digit is for the appearance, the second one for the brightness.

1.3.16.1 First digit of setting

The first digit is defining the type of changing between time and temperature. Fade-in will changeover with brightness effect from time to temperature.

1.3.16.1.1 br 0 Fade-in off

Fading is not activated.

1.3.16.1.2 br 1 Fade-in on

Fading is activated.

1.3.16.2 Second Digit of Setting

This setting is defining the brightness mode of the display.

1.3.16.2.1 br 8 Manual setting

The second digit of the brightness settings can be adjusted manually from 0 to 9. Value 0 is minimum brightness and value 9 is maximum brightness. This adjustment you can also be effected by using the menu of TdC8001 or TIMY.

1.3.16.2.2 br d Daytime Dependent Brightness [x3]

Brightness is set automatically, depending on the daytime.

1.3.16.2.3 br A Light Sensor Dependent Brightness [x4]

With this setting, the brightness depends on the light sensor. If no light sensor is connected, maximum brightness is set.

1.3.17 SE Displaymode and Serial Interface [A1], (S)

This setting is for the interface parameters. The first digit in the setting is for the display mode, the second one for the interface speed.

1.3.17.1 Diplaymode

Here, the different display modes for your score board can be adjusted.

1.3.17.1.1 SE S hh:mm:ss [0x] (1sec)

1.3.17.1.2 SE t h:mm:ss.z (1/10sec) and speed with 1/10

1.3.17.1.3 SE h mm:ss:zh [1x] (1/100sec)

1.3.17.1.4 SE 3 m:ss.zht (1/1000sec)

1.3.17.1.5 SE r Bib, Rank [2x]

1.3.17.1.6 SE E Extended Mode [4x]

This advanced mode serves for configuring the complete display yourself. You can define which byte is shown at which position on the score board.
If the serial setting is in this mode, you have some more parameters to adjust the mode.
These parameters are 1 ,1: ,2 ,2: ,… [A5, A6,…B0, B1,…]. For a detailed description how to adjust these parameters, see point 1.4

1.3.17.1.7 SE n Slave/Master Communication (RS485 or RS232, master=TX, slave=RX) [5x] and also for GPS operation (set 4800 baud = Sen4)

1.3.17.1.8 SE H mm:ss.zh [1x] (1/100sec.)

Identically to SEh but in the stopwatch mode the time is shown in seconds. Instead of 1:00 minutes 60 seconds is displayed.
See also point 2.1.4.3.

1.3.17.1.9 SE c Game Console CKN Playing Time (mm:ss, central) must be 9600 Baud!

!!!D-LINE is connected with RS232 of the CKN console (Pin5=GND, PIN2=data)!!!
Works as from CKN software 11-2006 (wireless protocol) – wired no longer exists!

1.3.17.1.10 SE A Freeze Daytime [3x]

With this function the daytime can be frozen with a manual button on the green black banana socket for the duration of the time-out time. The daytime continues internally.

1.3.17.2 Transfer Speed/Protocol

The second digit of the setting is responsible for the transfer speed of the serial interface.

1.3.17.2.1 SE 2 2400, N, 8, 1 ALGE-Standard [x0]

1.3.17.2.2 SE 4 4800, N, 8, 1 ALGE [x1]

1.3.17.2.3 SE 9 9600, N8, 1 ALGE [x2]

1.3.17.2.4 SE 1 19200, N, 8, 1 ALGE [x3]

1.3.17.2.5 SE L Special Format

1.3.17.2.6 SE S Old devices like the S3, Selftimer SF2 [x4]

1.1.1.1.1 SE d Countdown Mode see point 2.1.2 Countdown (from Version 4.5)

1.3.18 t0 Time-Out Time-Temperature-Date [A2]

This setting defines the time after which the display board switches from serial display mode back to time-temp mode. If it is set on 00, the parameters described from point 1.3.1 to point 1.3.15.2.7 are no longer visible. The display modes for daytime, temperature and date are thus deactiveted. Up to version 3.7 the specifications are in seconds and from version 3.8 the value is multiplied by 10, so an adjustment of 24 is 240 seconds!

1.3.19 Ad Address Setting [A3] (A)

To use more than one D-LINE on an addressed protocol, you have to define the addresses of every single display board. Normally, the first line is address 1 Ad 01, second line address 2 Ad 02, etc.

Depending on the sport, this setting can be important to display the serial data of your timing device correctly. Please also refer to the manual of the corresponding timing device. The sport specific intructions for controlling the score board can be found there.

1.4 Extended Data Mode

In this mode, one byte of the data string can be assigned to each digit. For example it is possible to display one a 6-digit score board the bib on the first 2 digits and the time in m:ss on the last 3 digits. For some sports like equestrian (with the Timer S4), you have to program the display for the presentation of the points in this mode. It is not possible to show datasets of differently addressed data strings!

1.4.1 Timer S4, Points Show Jumping

Configuration of a 6-digit display for showing the points by Timer S4 (equestrian) in the middle of the display.

The data package of the Timer S4 looks as follows:

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
PZ	PE		.					H	H	:	M	M	:	S	S	.	z			Pz	Pe	CR	
PZ	PE							H	H	:	M	M	:	S	S	.	z	h	t	Pz	Pe	CR	

The parameters have to be set as follows:

Extended protocol, 2400 bps [A1-40] (S-E2)

Device address 00 [A3 00] (A-00)

First digit is always inactive [A5-00]

Dot or colon after first digit is always inactive [A6-00]

Second digit is to display points PZ [A7-01]

Dot or colon after second digit is always inactive [A8-00]

Third digit is to display points PE [A9-02]

Show the dot which is sent after the full second [B0-17]

Fourth digit is to show points (PZ) [B1-21]

Dot or colon after fourth digit is always inactive [B2-00]

Fifth digit is to show points [B3-22]

Dot or colon after fifth digit is always inactive [B4-00]

Sixth digit is always inactive [B5-00]

1.4.2 TdC8001, Points Show Jumping

Configuration of a 6-digit display for showing the points by TdC8001 (equestrian) in the middle of the display.

The parameters have to be set as follows:

Extended protocol, 2400 bps [A1-40] (S-E2)

Device address 00 [A3 00] (A-00)

First digit is always inactive [A5-00]

Dot or colon after first digit is always inactive [A6-00]

Second digit is to display points (PZ) [A7-02]

Dot or colon after second digit is always inactive [A8-00]

Third digit is to display points (PZ) [A9-02]

Shows the dot which is sent after the full second [B0-17]

Fourth digit is to show points (PZ) [B1-21]

Dot or colon after fourth digit is always inactive [B2-00]

Fifth digit is to show points [B3-22]

Dot or colon after fifth digit is always inactive [B4-00]

Sixth digit is always inactive [B5-00]

The other 2 boards are to be adjusted as shown below

Scoreboard Time:

Scoreboard Bib - Rank:

1.4.3 8-digit Scoreboard for Swimming

Configuration of an 8-digit scoreboard to show rank, lane and time. This scoreboard for swimming has a special layout with an empty space between first and second and between second and third digit.

The parameters have to be set as follows:

Extended Protocol, 2400 bps [A1-40]
Device address 01 [A3 01]

First digit shows the rank [A5-11]
Point or colon after first digit is always inactive [A6-00]
Second digit shows the lane [A7-21]
Point or colon after second digit is always inactive [A8-00]
Third digit shows the minute tens [A9-13]
Point or colon after third digit is always inactive [B0-00]
Fourth digit shows the minutes [B1-14]
Point or colon after fourth digit is active [B2-15]
Fifth digit shows the second tens [B3-16]
Point or colon after fifth digit is always inactive [B4-00]
Sixth digit shows the seconds [B5-17]
Seventh digit shows the tenth of a second [B6-19]
Point or colon after seventh digit is always inactive [B7-00]
Eighth digit shows the hundredth of a second [B8-19]

1.4.4 Fixed Comma or Colon

At some older ALGE devices comma or colon may not be included in the protocol. They can be permanently programmed on the D-LINE.

Comma	98
Colon	99

2 Special Functions

D-LINE scoreboards can be used as stand-alone stopwatch, countdown clock or counter.

2.1 Stopwatch, Countdown and Counter

To use one of these modes please to connect a manual button 023-xx at the green and red banana socket of the D-LINE. By pressing the manual button, the mode is started. For setting the different modes change the paramter [A1] as described below.

2.1.1 Stopwatch (from Version 4.5)

Starting with version 4.5 we offer a stopwatch function that allows to input a time from which the stopwatch starts to run. The delay time of the stopwatch is 1 second, i. e. after each impulse no further impulse can be triggered for the period of one second (to avoid incorrect photocell impulses). With the parameters different formats for the stopwatch can be set.

	Stopwatch	format: hh:mm:ss (hours, minutes, seconds)
	Stopwatch	format: mm:ss:zh (minutes, seconds, 1/100)
	Stopwatch	format: ssss:zh (seconds mode with 1/100)

The stopwatch can be started from zero (standard) or any other time that is set. For setting this time use the push button 023-xx and press it for about 10 seconds until the first digit starts to blink. If the button continues to be pressed, the blinking setting is saved and the cursor moves to the next digit. In case this digit is already set correctly, continue to press the button until in the end the start time is displayed without blinking. Pressing the manual button again starts the stopwatch.
The stopwatch can be stopped or re-started any time by pressing (intermediate or end time). If the button is pressed for about 5 seconds the display is reset to zero or after 10 seconds the time can be reset as required.

2.1.2 Countdown (from Version 4.5)

Starting with version 4.5 we offer a countdown function that allows to set the countdown time. With the parameters different formats for the countdown can be set.

	Countdown	format: hh:mm:ss (hours, minutes, seconds)
	Countdown	format: mm:ss:zh (minutes, seconds, 1/100)
	Countdown	format: ssss:zh (seconds mode with 1/100)

The standard start time for the countdown is one minute. For setting this time use the push button 023-xx and press it for about 10 seconds until the first digit starts to blink. If the button continues to be pressed, the blinking setting is saved and the cursor moves to the next digit. In case this digit is already set correctly, continue to press the button until in the end the start time is displayed without blinking. Pressing the manual button again starts the countdown.
The countdown can be stopped or re-started any time by pressing (time-out). If the button is pressed for about 5 seconds the display is reset to zero or after 10 seconds the time can be reset as required.

2.1.3 Counter (from Version 4.5)

Starting with version 4.5 we offer a counter function that allows to set any number you like and count up or down from this number with each keystroke (manual button 023-xx at green and black banana socket).

Counter up
Counter down

The counter mode is switched on. Depending on the set mode the push button has a count up or count down function. Pressing the button for about 2 seconds counts in the opposite direction.
If the first digit of the display blinks you entered the mode for setting the starting number. If the button continues to be pressed, the blinking setting is saved and the cursor moves to the next digit. In case this digit is already set correctly, continue to press the button until in the end the starting number is displayed without blinking. Pressing the manual button again counts one down. In case the button is pressed for about 2 seconds it counts one up. If pressed for about 10 seconds the display is reset to the initial value.

2.1.4 Stopwatch-Countdown (Version 4.3.and 4.4)

This function is available from version 4.3 with fixed start and stop delay time of 4 seconds to eliminate incorrect photocell impulses. Switching between stopwatch and countdown is effected by continued pressing of the manual button for about 20 seconds. Displaying 00:00.00 indicates the stopwatch mode, blinking of the first digit the countdown mode. If the button continues to be pressed, the blinking setting is saved and the cursor moves to the next digit. In case this digit is already set correctly, continue to press the button until in the end the starting value is displayed without blinking. Pressing the button again starts the countdown. If pressed for about 10 seconds the display is reset to the initial value.

2.1.4.1 hh:mm:ss [A1-0x]

Time format for stopwatch and countdown

2.1.4.2 mm:ss:zh [A1-1x]

Time format for stopwatch and countdown

2.1.4.3 ssss:zh

Time format for stopwatch and countdown in seconds mode; for driving (equestrian) or other sports where time is shown 60 seconds instead of 1:00 minutes; available from version 4.3.

2.1.5 Counter (Version 4.3.and 4.4)

Switching between count up and count down is effected by continuously pressing the manual button for about 20 seconds. Disply of 0 indicates the count up mode, first digit blinking the count down mode.

2.1.5.1 Counter

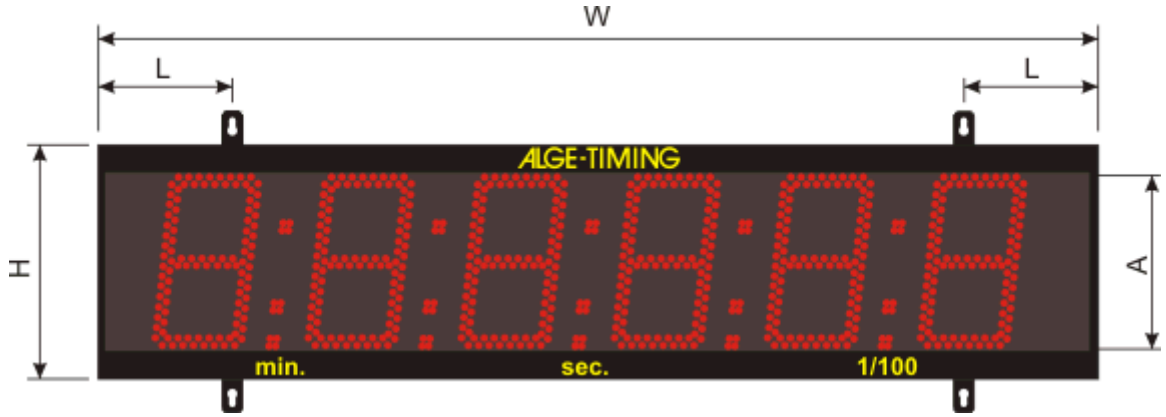
Enables the counter mode. Depending on the counting direction, the function of the manual button is different. Pressing shortly the button counts up (down) and continued pressing for about 2 seconds counts down (up).

2.1.5.2 Adjusting the start value

If the first digit of the display blinks you entered the mode for setting the start value. Keeping the button pressed for a while, the blinking value is saved and the cursor moves to the next digit. In case this digit is set correctly, keep the button pressed until in the end the start value is shown without blinking. Pressing the button again counts down by one. If the button is pressed for 2 seconds, it counts up. Countinue to press for as long as 10 seconds resets the display to the start value.

3 Technical Data

3.1 Dimensions



Type	Number of digits	Figure Height A [mm]	Width W [mm]	Hight H [mm]	Depth [mm]	Suspension Brackets L [mm]	Bottom Brackets	Middle Brackets	Max. Reading Distance [m]	Power Input [W]
D-LINE57-I-3-E1	3	57	400	130	60	100	no	no	25	6
D-LINE57-I-4-E0	4	57	400	130	60	100	no	no	25	8
D-LINE57-I-6-E0	6	57	500	130	60	150	no	no	25	13
D-LINE100-I-4-E0	4	100	650	180	60	100	no	no	50	8
D-LINE100-I-6-E0	6	100	800	180	60	150	yes	no	50	13
D-LINE80-O-3-E0	3	80	450	150	60	100	no	no	40	6
D-LINE80-O-4-E0	4	80	450	150	60	100	no	no	40	8
D-LINE80-O-6-E0	6	80	600	150	60	150	no	no	40	13
D-LINE150-O-3-E0	3	150	600	250	60	150	yes	no	75	6
D-LINE150-O-4-E0	4	150	730	250	60	150	yes	no	75	9
D-LINE150-O-5-E1	5	150	956	250	60	150	yes	no	75	11
D-LINE150-O-6-E0	6	150	956	250	60	150	yes	no	75	14
D-LINE250-O-3-E0	3	250	850	350	80	200	yes	no	125	17
D-LINE250-O-4-E0	4	250	1100	350	80	200	yes	no	125	22
D-LINE250-O-5-E1	5	250	1493	350	80	200	yes	no	125	28
D-LINE250-O-6-E0	6	250	1493	350	80	200	yes	no	125	34
D-LINE450-O-4-E0	4	450	1900	600	70	200	yes	no	225	58
D-LINE450-O-6-E0	6	450	2490	600	70	200	yes	yes	225	88
D-LINE600-O-4-E0	4	600	2490	800	70	200	yes	yes	300	87
D-LINE600-O-6-E0	6	600	3400	800	70	200	yes	yes	300	133
D-LINE800-O-4-E0	4	800	3300	1000	70	200	yes	yes	400	120
D-LINE800-O-6-E0	6	800	4800	1000	70	200	yes	yes	400	180
D-LINE1000-O-4-E0	4	1000	3900	1400	70	200	yes	yes	500	180
D-LINE1000-O-6-E0	6	1000	5700	1400	70	200	yes	yes	500	270
D-LINE1500-O-4-E0	4	1500	5800	2000	70	200	yes	yes	750	340
D-LINE1500-O-6-E0	6	1500	8500	2000	70	200	yes	yes	750	510

3.2 Power Supply

3.2.1 Supply from Mains

Display Board up to 250 cm Figure Height:
100 – 240VAC / 50-60 Hz, automatic switching

Display Board with a Figure Height of 450 cm or Higher:
230 VAC / 50 Hz or 110 VAC / 60 Hz (factory setting as ordered)
Manual setup at integrated power supply possible!

3.2.2 Supply form External Battery

10 – 12 VDC, connection at Amphenol socket

3.3 Connections

3.3.1 D-LINE

Internal button to set the display mode

Amphenol socket:
1 +10 - 12 Volt
2 Ground
3 Data Out
E Data In

Connection for push button for stopwatch, countdown and counter function

Data In and Ground

100-240V, 50-60Hz
1.0A Fuse

3.3.2 D-SAT

The D-SAT has all connections on feeder clamps.

3.4 Interface Formats

3.4.1 Serial Interface:

Signal compatible with RS232C interface, serial, no handshake operation.

3.4.1.1 Standard Settings

2400 Baud
1 Start bit
8 Data ASCII-Bit
1 Stopbit
No Paritybit

3.4.1.2 Transmission Protocol

On the following page the protocols are indicated, which can be sent by ALGE-TIMING timing devices to the display boards.

J..... Identifier for interconnected display board A to J (A = board 1, B = board 2, C = board 3,..., J = board 10)
Nt..... Start number (thousandth-digit)
Nh..... Start number (hundredth-digit)
Nz..... Start number (tenth-digit)
Ne..... Start number (1-digit)
H..... Hours
M ..... Minutes
S..... Seconds
z..... 1/10 Seconds
h ..... 1/100 Seconds
t ..... 1/1000 Seconds
Rz..... Rank (tenth-digit)
Re..... Rank (1-digit)
X..... Carriage Return (0D Hex.) or Line Feed (0A Hex.) and Carriage Return (0D Hex.)
. ..... Identifier for running time if dot on fourth digit.
A..... ALGE TdC 4000: Identifier for intermediate time 1 (at fourth digit)
B..... ALGE TdC 4000: Identifier for intermediate time 2 (at fourth digit)
C..... ALGE TdC 4000: Identifier for ending time (at fourth digit)
D..... ALGE TdC 4000: Identifier for total time (at fourth digit)
K..... Comet: 1 = Start channel, 2 = Start channel, 4 = Stop channel or 8 = Stop channel
Tc ..... Timer identification at the Comet (Timer A or B)
Tt ..... Timer S4 Split and 3-Parcours: Identification Parcours A, B or C
Pr..... Identification for Timer S4 Parcours
PZ..... Timer S4 Show Jumping: fault points (tenth-digit)
PE..... Timer S4 Show Jumping: fault points (1-digit)
Pz ..... Timer S4 Show Jumping: fault points (1/10 points)
Ph..... Timer S4 Show Jumping: fault points (1/100 points)
#h ..... Timer S4 18-Channel-Timer: consecutive number (hundredth-digit)
#z..... Timer S4 18-Channel-Timer: consecutive number (tenth-digit)
#e ..... Timer S4 18-Channel-Timer: consecutive number (1-digit)
Pp..... Timer S4 Parallel slalom: Identification for show jumping
r ..... Timer S4 Parallel slalom: Identification for red parcours (ASCII r)
b ..... Timer S4 Parallel slalom: Identification for blue parcours (ASCII b)
S..... Timer S4 Speed: Identification for speed measurement
§ ..... Timer S4 Speed: Identifier for measurement (01Hex=km/h, 02Hex=m/s or 03Hex=mph)
Z..... Timer S4 Speed: Speed
F..... Timer S4 Swimming: Identifier for interconnected display board A to H (A=Tafel1, B=Tafel2,..., H=Tafel8)

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
J	Nh	Nz	Ne						H	H	:	M	M	:	S	S	.	z	h	t	Rz	Re	X	time for board 1
J	Nh	Nz	Ne						H	H	:	M	M	:	S	S							X	running time board 10
Nh	Nz	Ne	.					H	H	:	M	M	:	S	S							X		running time
Nh	Nz	Ne	A					H	H	:	M	M	:	S	S	.	z	h	t	Rz	Re	X		intermediate 1
Nh	Nz	Ne	B					H	H	:	M	M	:	S	S	.	z	h	t	Rz	Re	X		intermediate 2
Nh	Nz	Ne	C					H	H	:	M	M	:	S	S	.	z	h	t	Rz	Re	X		run time
Nh	Nz	Ne	D					H	H	:	M	M	:	S	S	.	z	h	t	Rz	Re	X		total time
Nh	Nz	Ne	K	Tc			Nt	H	H	:	M	M	:	S	S	.	z	h	t	X				run time
		Tt	.					H	H	:	M	M	:	S	S					X				running time
		Tt						H	H	:	M	M	:	S	S	.	z	h	t	X				run time
	Pr	Tt	.					H	H	:	M	M	:	S	S					X				running time
	Pr	Tt						H	H	:	M	M	:	S	S	.	z	h	t	X				run time
Pz	PE		.					H	H	:	M	M	:	S	S	.	z			Pz	Ph	X		running time
Pz	PE							H	H	:	M	M	:	S	S	.	z	h	t	Pz	Ph	X		run time
#h	#z	#e	.					H	H	:	M	M	:	S	S	.	z			X				running time
#h	#z	#e						H	H	:	M	M	:	S	S	.	z	h	t	X				run time
			Pp									r	:	S	z		h	t	X					run time "red winns"
			Pp									b	:	S	z		h	t	X	X				run time "blue winns"
Pp	r		.					H	H	:	M	M	:	S	S	.	z			X				running time "red"
Pp	b							H	H	:	M	M	:	S	S	.	z	h	t	X				run time "blue"
Pp	r											r	:	S	S	.	z	h	t	h				difference time red winns
				S			§					Z		Z	Z	.	Z	Z	X					speed
F				.									M	:	S	S	.	z			X			running time (ranking)
F													M	:	S	S	.	z	h		X			run time (ranking)
				.									M	:	S	S	.	z			X			running time (board 1)
													M	:	S	S	.	z	h	Re	X			run time (board 1)
#h	#z	#e	.					H	H	:	M	M	:	S	S	.	z			X				running time
#h	#z	#e						H	H	:	M	M	:	S	S	.	z	h	t	X				run time

3.4.2 RS485

This interface is optional available with customized protocols.

3.4.3 Ethernet

This interface is optional available with customized UTP-Protocol.

Subject to changes

Copyright by

ALGE-TIMING GmbH
Rotkreuzstr. 39
6890 Lustenau / Austria
www.alge-timing.com